

September 30, 2022

Dear Washington State Building Code Council,

Mr. D. Scott Peterson from the NW Gas Association submitted testimony to the SBCC on September 30, 2022, stating that there is no longitudinal study finding a relationship between gas but there is a longitudinal study finding that there no relationship between gas stoves and asthma. There are several problems with Mr. Petersons' statement.

The article mentioned by Mr. Peterson, *"Cooking fuels and prevalence of asthma: a global analysis of phase three of the International Study of Asthma and Allergies in Childhood (ISAAC),"* was published in 2013. It is misleading that Mr. Peterson states that all the other science is cross-sectional while this study is longitudinal. In fact, the study he mentioned is a cross-sectional study, which means that the scientists surveyed children asking about past symptoms while also asking about their stove fuel sources. It was also conducted at the school rather than at home and is prone to recall bias. There are no details provided in the study about the type of ventilation used in the homes for those who participated; the article itself stated that differences in findings among studies may have to do with differences in the type and efficiency of ventilation systems. The study "did not obtain information about the types of cooking fuel used in early life or when the mother was pregnant with the child." The category in the study "multiple non-fire fuels" included "gas, electricity, microwave, and even solar energy." This category was associated with "wheeze in girls in both age groups and in the younger children in affluent countries."

Bias in observational studies are always a concern, which is why systematic reviews of the impacts of gas on human health are so very important—we are able to gather multiple studies together and evaluate the quality of those studies and consistencies across those studies. A systematic review conducted by Lin, et al, entitled *"Meta-analysis of the effects of indoor nitrogen dioxide and gas cooking on asthma and wheeze in children"* consists of multiple cross-sectional studies but some longitudinal ones, as well. They concluded "children living in a home with gas cooking have a 42% increased risk of having current asthma, a 24% increased risk of lifetime asthma and an overall 32% increased risk of having current and lifetime asthma."

Moreover Mr. Peterson found the assertion that gas stoves could be associated with premature mortality. But numerous studies have shown that nitrogen oxides, a very dangerous pollutant that is released during the burning of gas stoves, is associated with all-cause, respiratory, and cardiovascular mortality. Studies have shown that levels of air pollution from gas stoves exceeds EPA limits for the outdoors—and while people spend 90% of their time indoors, this is an important threat to our health, and the health of our children.

Sincerely,

Claire Richards, PhD, RN